

EFFICIENT REAL-TIME ANALYSIS METHOD OF ERROR LOGS FOR
AUTONOMOUS SYSTEMS

ABSTRACT

An error logging and analysis system is used to detect a type of error condition, assign a
5 numeric value corresponding to the severity of the error condition, record the time of the
error condition, and determine the frequency between subsequent error conditions of the
same type. A weighted error rate is generated as a function of the severity of the initial
error condition, the frequency of subsequent error conditions, and a percentage of any
preceding weighted error rates. These weighted error rates are compared to a
10 predetermined threshold to determine if the error condition is statistically significant.